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TECHNICAL SPECIFICATION

**5G;  
Application Data Analytics Enablement Service (ADAES);  
Stage 3  
(3GPP TS 24.559 version 19.3.0 Release 19)**



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650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - APE 7112B  
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- need not** indicates permission not to do something

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- can** indicates that something is possible
- cannot** indicates that something is impossible

The constructions "can" and "cannot" are not substitutes for "may" and "need not".

- will** indicates that something is certain or expected to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document
- will not** indicates that something is certain or expected not to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document
- might** indicates a likelihood that something will happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

**might not** indicates a likelihood that something will not happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

In addition:

**is** (or any other verb in the indicative mood) indicates a statement of fact

**is not** (or any other negative verb in the indicative mood) indicates a statement of fact

The constructions "is" and "is not" do not indicate requirements.

---

# 1 Scope

The present document specifies the stage 3 protocol and data model for the Application Data Analytics Enablement (ADAE) Services. It provides stage 3 protocol definitions and message flows, and specifies the APIs for services offered by the ADAE Server.

The stage 2 architecture and procedures are specified in 3GPP TS 23.436 [3].

The common protocol and interface aspects for API definition are specified in clause 5.2 of 3GPP TS 29.122 [6].

---

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

- [1] 3GPP TR 21.900: "Technical Specification Group working methods".
- [2] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [3] 3GPP TS 23.436: "Procedures for Application Data Analytics Enablement Service".
- [4] 3GPP TS 26.531: "Data Collection and Reporting; General Description and Architecture".
- [5] 3GPP TS 26.532: "Data Collection and Reporting; Protocols and Formats".
- [6] 3GPP TS 29.122: "T8 reference point for Northbound APIs".
- [7] 3GPP TS 29.501: "5G System; Principles and Guidelines for Services Definition; Stage 3".
- [8] 3GPP TS 29.523: "5G System; Policy Control Event Exposure Service".
- [9] 3GPP TS 29.549: "Service Enabler Architecture Layer for Verticals (SEAL); Application Programming Interface (API) specification".
- [10] 3GPP TS 29.571: "5G System; Common Data Types for Service Based Interfaces".
- [11] 3GPP TS 33.434: "Service Enabler Architecture Layer for Verticals (SEAL); Security Aspects".
- [12] OpenAPI: "OpenAPI Specification Version 3.0.0", <https://spec.openapis.org/oas/v3.0.0>.
- [13] IETF RFC 9112: "HTTP/1.1".
- [14] IETF RFC 9110: "HTTP Semantics".
- [15] IETF RFC 9111: "HTTP Caching".
- [16] IETF RFC 9113: "HTTP/2".
- [17] IETF RFC 8259: "The JavaScript Object Notation (JSON) Data Interchange Format".
- [18] 3GPP TS 29.520: "5G System; Network Data Analytics Services; Stage 3".

---

## 3 Definitions of terms, symbols and abbreviations

### 3.1 Terms

For the purposes of the present document, the terms given in 3GPP TR 21.905 [2] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [2].

**ADAE client:** An entity that provides the client side functionalities corresponding to the ADAE.

**ADAE server:** An entity that provides the server side functionalities corresponding to the ADAE.

For the purposes of the present document, the following terms and definitions given in 3GPP TS 23.436 [3] apply:

**ADAE service**  
**SEAL server**  
**SEAL service**  
**VAL application**  
**VAL server**  
**VAL service**  
**VAL client**  
**Vertical**  
**Vertical application**

For the purposes of the present document, the following terms and definitions given in 3GPP TS 26.531 [4] apply:

**data collection client**  
**direct reporting**

### 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [2] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [2].

ADAE	Application Data Analytics Enablement
ADAEC	Application Data Analytics Enablement Client
ADAES	Application Data Analytics Enablement Server
API	Application Programming Interface
DC-AF	Data Collection AF
DC-Client	Data Collection Client
JSON	JavaScript Object Notation
SEAL	Service Enabler Architecture Layer
UE	User Equipment
VAL	Vertical Application Layer

---

## 4 General description

### 4.1 Overview

Application data analytics enablement service enables an application data analytics enablement client (ADAEC) and a vertical application layer (VAL) server to communicate with an application data analytics enablement server (ADAES).

---

## 5 Functional entities

### 5.1 Application data analytics enablement server (ADAES)

The ADAES is a functional entity with a unique identity in the PLMN and uses the provided data analytics to administer the operations and performance of one or more VAL applications.

### 5.2 Application data analytics enablement client (ADAEC)

The ADAEC is a functional entity with a unique identity and acts as the VAL application client which provides data analytics of the VAL applications.

---

## 6 Application data analytics enablement service API

### 6.1 General

The clause describes the procedures of the application data analytics enablement service API.

### 6.2 Application performance analytics

#### 6.2.1 Service description

##### 6.2.1.1 Overview

The ADAE\_ServiceConfiguration API, as defined 3GPP TS 23.436 [3], allows the ADAES via ADAE-UU reference point to subscribe to ADAEC to the event of the VAL performance analytics.

#### 6.2.2 Service Operations

##### 6.2.2.1 Introduction

The service operation defined for ADAE\_ServiceConfiguration API for application performance analytics is shown in the table 6.2.2.1-1.

**Table 6.2.2.1-1: Operations for application performance analytics**

Service operation name	Description	Initiated by
Subscribe_VAL_Performance_Analytics	This service operation is used by ADAES to subscribe to the event of the VAL performance analytics.	ADAES
Notify_VAL_Performance_Analytics	This service operation is used by ADAEC to notify about the VAL performance analytics.	ADAEC
Unsubscribe_VAL_Performance_Analytics	This service operation is used by ADAES to unsubscribe from the event of the VAL performance analytics.	ADAES

##### 6.2.2.2 Subscribe\_VAL\_Performance\_Analytics

###### 6.2.2.2.1 General

This service operation is used by the ADAES for VAL performance analytics event subscription to the ADAEC.

#### 6.2.2.2.2 Subscribing to VAL performance analytics event using Subscribe\_VAL\_Performance\_Analytics service operation

To subscribe to VAL performance analytics event, the ADAES shall send an HTTP POST request with a Request-URI according to the pattern "{apiRoot}/adae-sc/<apiVersion>/application-performance" and with a body containing data type AppPerfSub as defined in clause 7.10.1.4.2.2 of 3GPP TS 29.549 [9].

Upon receipt of the HTTP POST request, the ADAEC shall:

- a) verify the identity of the ADAES and determine if the ADAES is authorized to subscribe to the VAL performance analytics event; and
- b) if the ADAES:
  - 1) is not authorized, the ADAEC shall respond to the ADAES with an appropriate error status code; or
  - 2) is authorized, the ADAEC shall create a new "Individual application performance event subscription" resource and respond to the ADAES with an HTTP "201 Created" status code, including a Location header field containing the URI for the created "Individual application performance event subscription" and the response body including the AppPerfSub data structure containing a representation of the created resource as defined in clause 7.1.3.

#### 6.2.2.3 Notify\_VAL\_Performance\_Analytics

##### 6.2.2.3.1 General

This service operation is used by the ADAEC to send notification to the ADAES with the VAL performance analytics event subscription to the ADAEC.

##### 6.2.2.3.2 Notifying VAL performance analytics event using Notify\_VAL\_Performance\_Analytics service operation

To notify VAL performance analytics event, the ADAEC shall send an HTTP POST request with a Request-URI according to the pattern "{notifUri}" and with a body containing data type AppPerfNotif as defined in clause 7.10.1.4.2.3 of 3GPP TS 29.549 [9].

Upon receipt of the HTTP POST request, the ADAES shall respond to the ADAEC with:

- a) if the request is successfully processed, a "204 No Content" status code and process the event notification; or
- b) if errors occur when processing the request, an appropriate error response as specified in clause 7.1.6.

#### 6.2.2.4 Unsubscribe\_VAL\_Performance\_Analytics

##### 6.2.2.4.1 General

This service operation is used by the ADAES to unsubscribe from the VAL performance analytics event.

##### 6.2.2.4.2 Unsubscribing from VAL performance analytics event using Unsubscribe\_VAL\_Performance\_Analytics service operation

To unsubscribe from VAL performance analytics event, the ADAES shall send an HTTP DELETE request to the resource representing the event in the ADAES as specified in clause 7.1.3.3.

Upon receiving the HTTP DELETE request:

- a) the ADAEC shall verify the identity of the ADAES and check if the ADAES is authorized to unsubscribe from the VAL performance analytics event associated with the resource URI "{apiRoot}/adae-sc/<apiVersion>/application-performance/{appPerfId}";

- b) if the ADAES is authorized to unsubscribe from the VAL performance analytics event, the ADAEC shall delete the resource pointed by the resource URI "{apiRoot}/adae-sc/<apiVersion>/application-performance/{appPerfId}";
- c) if the request is successfully processed, the ADAEC shall respond to the ADAES with a "204 No Content" status code; and
- d) if errors occur when processing the request, the ADAEC shall respond to the ADAES with an appropriate error response as specified in clause 7.1.6.

## 6.3 UE-to-UE session performance analytics

### 6.3.1 Service description

#### 6.3.1.1 Overview

The ADAE\_ServiceConfiguration API, as defined 3GPP TS 23.436 [3], allows the ADAES via ADAE-UU reference point, to obtain the UE-to-UE session performance analytics from the ADAEC.

### 6.3.2 Service Operations

#### 6.3.2.1 Introduction

The service operation defined for ADAE\_ServiceConfiguration API for UE-to-UE session performance analytics is shown in the table 6.3.2.1-1.

**Table 6.3.2.1-1: Operations for UE-to-UE session performance analytics**

Service operation name	Description	Initiated by
Fetch_UE2UE_Session_Performance_Analytics	This service operation is used by ADAES to obtain the UE-to-UE session performance analytics.	ADAES

#### 6.3.2.2 Fetch\_UE2UE\_Session\_Performance\_Analytics

##### 6.3.2.2.1 General

This service operation is used by the ADAES for obtaining the UE-to-UE session performance analytics from the ADAEC.

##### 6.3.2.2.2 Obtaining UE-to-UE session performance analytics using Fetch\_UE2UE\_Session\_Performance\_Analytics service operation

To obtain the UE-to-UE session performance analytics, the ADAES shall send an HTTP POST request with a Request-URI according to the pattern "{apiRoot}/adae-sc/<apiVersion>/ue2ue-session-performance/fetch" and with a body containing data type Ue2UePerfReq as defined in clause 7.1.5.2.2.

Upon receipt of the HTTP POST request, the ADAEC shall:

- a) verify the identity of the ADAES and determine if the ADAES is authorized to obtain the UE-to-UE session performance analytics; and
- b) if the ADAES:
  - 1) is not authorized, the ADAEC shall respond to the ADAES with an appropriate error status code; or
  - 2) is authorized, the ADAEC shall respond to the ADAES with an HTTP "200 OK" status code with the response body including the Ue2UePerfResp as defined in clause 7.1.3.3.4.2 with the following attributes:

- i) UE-to-UE session performance analytics;
- ii) one or more VAL UEs; and
- iii) identity of the UE-to-UE session performance analytics.

## 6.4 Edge load data collection

### 6.4.1 Service description

The ADAE\_ServiceConfiguration API, as defined 3GPP TS 23.436 [3], allows the ADAES via ADAE-UU reference point to subscribe to ADAEC to the event of the edge load data collection.

### 6.4.2 Service Operations

#### 6.4.2.1 Introduction

The service operation defined for ADAE\_ServiceConfiguration API for edge load data collection is shown in the table 6.4.2.1-1.

**Table 6.4.2.1-1: Operations for edge load data collection**

Service operation name	Description	Initiated by
Subscribe_Edge_Load_Data_Collection	This service operation is used by ADAES to subscribe to the event of the edge load data collection.	ADAES
Notify_Edge_Load_Data_Collection	This service operation is used by ADAEC to notify about the edge load data collection.	ADAEC
Unsubscribe_Edge_Load_Data_Collection	This service operation is used by ADAES to unsubscribe from the edge load data collection.	ADAES

#### 6.4.2.2 Subscribe\_Edge\_Load\_Data\_Collection

##### 6.4.2.2.1 General

This service operation is used by the ADAES for edge load data collection event subscription to the ADAEC.

##### 6.4.2.2.2 Subscribing to edge load data collection event using Subscribe\_Edge\_Load\_Data\_Collection service operation

To subscribe to edge load data collection event, the ADAES shall send an HTTP POST request with a Request-URI according to the pattern "{apiRoot}/adae-sc/<apiVersion>/edge-load" and with a body containing data type EdgeSub as defined in clause 7.10.7.4.2.2 of 3GPP TS 29.549 [9].

Upon receipt of the HTTP POST request, the ADAEC shall:

- a) verify the identity of the ADAES and determine if the ADAES is authorized to subscribe to the edge load data collection event; and
- b) if the ADAES:
  - 1) is not authorized, the ADAEC shall respond to the ADAES with an appropriate error status code; or
  - 2) is authorized, the ADAEC shall create a new "Individual edge load event subscription" resource and respond to the ADAES with an HTTP "201 Created" status code, including a Location header field containing the URI for the created "Individual edge load event subscription" and the response body including the EdgeSub data structure containing a representation of the created resource as defined in clause 7.1.3.

### 6.4.2.3 Notify\_Edge\_Load\_Data\_Collection

#### 6.4.2.3.1 General

This service operation is used by the ADAEC to send notification to the ADAES with the edge load data collection event subscription to the ADAEC.

#### 6.4.2.3.2 Notifying edge load data collection event using Notify\_Edge\_Load\_Data\_Collection service operation

To notify edge load data collection event, the ADAEC shall send an HTTP POST request with a Request-URI according to the pattern "{notifUri}" and with a body containing data type EdgeNotif as defined in clause 7.10.7.4.2.3 of 3GPP TS 29.549 [9];

Upon receipt of the HTTP POST request, the ADAES shall respond to the ADAEC with:

- a) if the request is successfully processed, a "204 No Content" status code and process the event notification; or
- b) if errors occur when processing the request, an appropriate error response as specified in clause 7.1.6.

### 6.4.2.4 Unsubscribe\_Edge\_Load\_Data\_Collection

#### 6.4.2.4.1 General

This service operation is used by the ADAES to unsubscribe from the edge load data collection event.

#### 6.4.2.4.2 Unsubscribing from edge load data collection event using Unsubscribe\_Edge\_Load\_Data\_Collection service operation

To unsubscribe from edge load data collection event, the ADAES shall send an HTTP DELETE request to the resource representing the event in the ADAES as specified in clause 7.1.3.6.

Upon receiving the HTTP DELETE request:

- a) the ADAEC shall verify the identity of the ADAES and check if the ADAES is authorized to unsubscribe from the edge load data collection event associated with the resource URI "{apiRoot}/adae-sc/<apiVersion>/edge-load/{edgeLdId}";
- b) if the ADAES is authorized to unsubscribe from the edge load data collection event, the ADAEC shall delete the resource pointed by the resource URI "{apiRoot}/adae-sc/<apiVersion>/edge-load/{edgeLdId}";
- c) if the request is successfully processed, the ADAEC shall respond to the ADAES with a "204 No Content" status code; and
- d) if errors occur when processing the request, the ADAEC shall respond to the ADAES with an appropriate error response as specified in clause 7.1.6.

## 6.5 Service experience performance analytics

### 6.5.1 General

The ADAE\_ServiceConfiguration API, as defined 3GPP TS 23.436 [3], allows the ADAES via ADAE-UU reference point to:

- pull from the ADAEC, the service experience information report.

## 6.5.2 Service Operations

### 6.5.2.1 Introduction

The service operation defined for ADAE\_ServiceConfiguration API for service experience information is shown in the table 6.5.2.1-1.

**Table 6.5.2.1-1: Operations for service experience information**

Service operation name	Description	Initiated by
Pull_Service_Experience_Information_Report	This service operation is used by ADAES to pull service experience information report.	ADAES

### 6.5.2.2 Configure\_Triggers\_Service\_Information\_Experience\_Report

#### 6.5.2.2.1 General

This service operation is used by the ADAEC to fetch the configuration triggers from the ADAES.

#### 6.5.2.2.2 Configuring service experience information reporting using Configure\_Triggers\_Service\_Information\_Experience\_Report service operation

To fetch the configuration triggers from the ADAES, if direct DC-Client is available in the UE, the ADAEC may use the direct DC-Client services as defined in clause 4.4.2 of 3GPP TS 26.532 [5]. The ADAEC may provide below information as input parameters to the application registration procedure:

- a) external application identifier specific to the ADAEC;
- b) application service provider identifier specific to the ADAES;
- c) callback listener of the ADAEC to receive the future response; and
- d) consent for the UE identity (i.e. GPSI) to be included in data reports, sent to the DC-AF.

Upon receiving the request, the DC-AF returns "DataReportingSession" resource as defined in clause 7.3.2.1 of 3GPP TS 26.532 [5] to DC-Client in the response message and in the "reportingRule" attribute, the "DataDomain" is set to "APPLICATION\_SPECIFIC" and the "applicationSpecificRecords" container in the "DataReportingRule" shall contain the triggers as specified in the "ConfigRepTrigger" data type defined in table 6.5.2.2.2-1.

On success, the DC-Client provides the "DataReportingSession" as defined in clause 7.3.2.1 of 3GPP TS 26.532 [5] to the ADAEC.

**Table 6.5.2.2-1: Definition of type ConfRepTrigger**

Attribute name	Data type	P	Cardinality	Description	Applicability
valServerIds	array(string)	M	1..N	Identities of one or more VAL servers, for which the configuration of the service experience information report applies.	
triggCrit	string	M	1	Information criteria about the triggers on which the service experience is information to be reported for the VAL server and is set to value "TRIGGER_CRITERIA".	
commonTriggCrit	string	O	0..1	Information criteria about the triggers (applicable to all VAL servers) on which the service experience information is fetched and is set to value "COMMON_TRIGGER_CRITERIA".	
srvExpMeas	DurationSec	O	0..1	Information about the service experience information measurements which needs to be fetched and included in the report. If not present, by default end-to-end response time is measured.	
notifyTarget	string	O	0..1	The target address which is notified.	

### 6.5.2.3 Void

### 6.5.2.4 Push\_Service\_Experience\_Information\_Report

#### 6.5.2.4.1 General

This service operation is used by the ADAEC to push the service experience information report to the ADAES.

#### 6.5.2.4.2 Pushing service experience information report using Push\_Service\_Experience\_Information\_Report service operation

When Direct DC-Client is available in the UE, to push the service experience information report to the ADAES based on the request from VAL client or trigger conditions meeting, the ADAEC shall:

- a) create the service experience information report as defined in "SrvExpInfoRep" data type in table 7.1.5.2.7-1; and
- b) invoke the "reportUeData" method as defined in clause 4.4.4 of 3GPP TS 26.532 [5] and provide "DataReport" data type as defined in clause 7.3.2.3 of 3GPP TS 26.532 [5] as input parameter with the "applicationSpecificRecords" attribute set with the "SrvExpInfoRep" data type in table 7.1.5.2.7-1.

On receiving the service experience information request, the ADAES shall process the report from ADAEC to determine/predict analytics and initiate further actions as defined in clause 8.9.2.1 of 3GPP TS 23.436 [3].

### 6.5.2.5 Pull\_Service\_Experience\_Information\_Report

#### 6.5.2.5.1 General

This service operation is used by the ADAES to pull the service experience information report from the ADAEC.

#### 6.5.2.5.2 Pulling service experience information report using Pull\_Service\_Experience\_Information\_Report service operation

To pull the service experience information report from the ADAEC, the ADAES shall send an HTTP POST request with a Request-URI according to the pattern "{apiRoot}/adae-sc/<apiVersion>/service-experience/pull" and with a body containing data type PullSrvExpInfo as defined in clause 7.1.5.2.6.

Upon receipt of the HTTP POST request:

- a) the ADAEC shall verify the identity of the ADAES and determine if the ADAES is authorized to pull the service experience information report; and
- b) if the ADAES:
  - 1) is not authorized, the ADAEC shall respond to the ADAES with an appropriate error status code; or
  - 2) is authorized, the ADAEC shall respond to the ADAES with an HTTP "200 OK" status code and with a body containing data type SrvExpInfoRep as defined in clause 7.1.5.2.7.

Upon receipt of the HTTP POST request, the ADAES shall respond to the ADAEC with a "204 No Content" status code and process the report.

## 6.6 Collision detection analytics

### 6.6.1 Service description

#### 6.6.1.1 Overview

The ADAE\_ServiceConfiguration API, as defined 3GPP TS 23.436 [3], allows the ADAES via ADAE-UU reference point, to obtain the collision detection analytics from the ADAEC.

### 6.6.2 Service operations

#### 6.6.2.1 Introduction

The service operations defined for ADAE\_ServiceConfiguration API for collision detection analytics are shown in the table 6.6.2.1-1.

**Table 6.6.2.1-1: Operations for collision detection analytics**

Service operation name	Description	Initiated by
Subscribe_Collision_Detection	This service operation is used by ADAES to subscribe to the event collision detection.	ADAES
Notify_Collision_Detection	This service operation is used by ADAEC to notify about the collision detection analytics.	ADAEC
Unsubscribe_Collision_Detection	This service operation is used by ADAES to unsubscribe to the event collision detection.	ADAES

#### 6.6.2.2 Subscribe\_Collision\_Detection

##### 6.6.2.2.1 General

This service operation is used by the ADAES for obtaining the collision detection analytics from the ADAEC.

##### 6.6.2.2.2 Subscribing to collision detection analytics using Subscribe\_Collision\_Detection service operation

To obtain the collision detection analytics, the ADAES shall send an HTTP POST request with a Request-URI according to the pattern "{apiRoot}/adae-sc/<apiVersion>/collision-detection" and with a body containing data type CollisionDetectionSub as defined in clause 7.10.10.4.2.2 of 3GPP TS 29.549 [9].

Upon receipt of the HTTP POST request, the ADAEC shall:

- a) verify the identity of the ADAES and determine if the ADAES is authorized to subscribe to the collision detection analytics; and
- b) if the ADAES:

- 1) is not authorized, the ADAEC shall respond to the ADAES with an appropriate error status code; or
- 2) is authorized, the ADAEC shall create a new "Individual collision detection analytics subscription" resource and respond to the ADAES with an HTTP "201 Created" status code with a Location header field containing the URI for the created "Individual collision detection analytics subscription" resource and the CollisionDetectionSub data structure in the response body containing a representation of the created resource as defined in clause 7.1.3.

### 6.6.2.3 Notify\_Collision\_Detection

#### 6.6.2.3.1 General

This service operation is used by the ADAEC to notify the ADAES about the collision detection analytics event.

#### 6.6.2.3.2 Notifying collision detection analytics using Notify\_Collision\_Detection service operation

To notify collision detection analytics, the ADAEC shall send an HTTP POST request with a Request-URI according to the pattern "{notifUri}" and with a body containing data type CollisionDetectionNotify as defined in clause 7.10.10.4.2.3 of 3GPP TS 29.549 [9].

Upon receipt of the HTTP POST request, the ADAES shall respond to the ADAEC with:

- a) if the request is successfully processed, a "204 No Content" status code and process the event notification; or
- b) if error occurs when processing the request, an appropriate error response as specified in clause 7.1.6.

### 6.6.2.4 Unsubscribe\_Collision\_Detection

#### 6.6.2.4.1 General

This service operation is used by the ADAEC to unsubscribe from the collision detection analytics.

#### 6.6.2.4.2 Unsubscribing from collision detection analytics using Unsubscribe\_Collision\_Detection service operation

To unsubscribe from collision detection analytics, the ADAES shall send an HTTP DELETE request to the "Individual collision detection analytics subscription" resource as specified in clause 7.1.3.10.

Upon receiving the HTTP DELETE request:

- a) the ADAEC shall verify the identity of the ADAES and check if the ADAES is authorized to unsubscribe from the collision detection analytics associated with the resource URI "{apiRoot}/adae-sc/<apiVersion>/collision-detection/{collisionDetectionId}";
- b) if the ADAES is authorized to unsubscribe from the collision detection analytics, the ADAEC shall delete the resource pointed by the resource URI "{apiRoot}/adae-sc/<apiVersion>/collision-detection/{collisionDetectionId}";
- c) if the request is successfully processed, the ADAEC shall respond to the ADAES with a "204 No Content" status code; and
- d) if error occurs when processing the request, the ADAEC shall respond to the ADAES with an appropriate error response as specified in clause 7.1.6.

## 6.7 Location-related UE Group Analytics

### 6.7.1 Service description

#### 6.7.1.1 Overview

The ADAE\_ServiceConfiguration API, as defined 3GPP TS 23.436 [3], allows the ADAES via ADAE-UU reference point, to obtain the location-related UE group analytics from the ADAEC.

### 6.7.2 Service operations

#### 6.7.2.1 Introduction

The service operations defined for ADAE\_ServiceConfiguration API for location-related UE group analytics are shown in the table 6.7.2.1-1.

**Table 6.7.2.1-1: Operations for Location-related UE Group Analytics**

Service operation name	Description	Initiated by
Subscribe_UE_Group_Location	This service operation is used by ADAES to subscribe to location-related UE group analytics.	ADAES
Notify_UE_Group_Location	This service operation is used by ADAEC to notify about location-related UE group analytics.	ADAEC
Unsubscribe_UE_Group_Location	This service operation is used by ADAES to unsubscribe to location-related UE group analytics.	ADAES

#### 6.7.2.2 Subscribe\_UE\_Group\_Location

##### 6.7.2.2.1 General

This service operation is used by the ADAES for obtaining the location-related UE group analytics from the ADAEC.

##### 6.7.2.2.2 Obtaining location-related UE group analytics using Subscribe\_UE\_Group\_Location service operation

To obtain the location-related UE group analytics, the ADAES shall send an HTTP POST request with a Request-URI according to the pattern "{apiRoot}/adae-sc/<apiVersion>/ue-group-loc-analytics" and with a body containing data type LocRelUeGroupSub as defined in clause 7.10.9.4.2.2 of 3GPP TS 29.549 [9].

Upon receipt of the HTTP POST request, the ADAEC shall:

- a) verify the identity of the ADAES and determine if the ADAES is authorized to obtain the location-related UE group analytics; and
- b) if the ADAES:
  - 1) is not authorized, the ADAEC shall respond to the ADAES with an appropriate error status code; or
  - 2) is authorized, the ADAC shall create a new "Individual location-related UE group analytics subscription" resource and respond to the ADAES with an HTTP "201 Created" status code with a Location header field containing the URI of the created "Individual location-related UE group analytics subscription" resource and the LocRelUeGroupSub data structure in the response body containing a representation of the created resource as defined in clause 7.1.3.

### 6.7.2.3 Notify\_UE\_Group\_Location

#### 6.7.2.3.1 General

This service operation is used by the ADAEC to notify the ADAES about the location-related UE group analytics event.

#### 6.7.2.3.2 Notifying location-related UE group analytics event using Notify\_UE\_Group\_Location service operation

To notify location-related UE group analytics event, the ADAEC shall send an HTTP POST request with a Request-URI according to the pattern "{notifUri}" and with a body containing data type LocRelUeGroupNotif as defined in clause 7.10.9.4.2.3 of 3GPP TS 29.549 [9].

Upon receipt of the HTTP POST request, the ADAES shall respond to the ADAEC with:

- a) if the request is successfully processed, a "204 No Content" status code and process the event notification; or
- b) if error occurs when processing the request, an appropriate error response as specified in clause 7.1.6.

### 6.7.2.4 Unsubscribe\_UE\_Group\_Location

#### 6.7.2.4.1 General

This service operation is used by the ADAEC to unsubscribe from the location-related UE group analytics event.

#### 6.7.2.4.2 Unsubscribing from location-related UE group analytics event using Unsubscribe\_UE\_Group\_Location service operation

To unsubscribe from location-related UE group analytics event, the ADAES shall send an HTTP DELETE request to the "Individual location-related UE group analytics subscription" resource as specified in clause 7.1.3.12.

Upon receiving the HTTP DELETE request:

- a) the ADAEC shall verify the identity of the ADAES and check if the ADAES is authorized to unsubscribe from the location-related UE group analytics event associated with the resource URI "{apiRoot}/adae-sc/<apiVersion>/ue-group-loc-analytics/{ueGroupLocId}";
- b) if the ADAES is authorized to unsubscribe from the location-related UE group analytics event, the ADAEC shall delete the resource pointed by the resource URI "{apiRoot}/adae-sc/<apiVersion>/ue-group-loc-analytics/{ueGroupLocId}";
- c) if the request is successfully processed, the ADAEC shall respond to the ADAES with a "204 No Content" status code; and
- d) if error occurs when processing the request, the ADAEC shall respond to the ADAES with an appropriate error response as specified in clause 7.1.6.

## 7 API Definitions

### 7.1 ADAE\_ServiceConfiguration API

#### 7.1.1 Introduction

The HTTP URIs used in HTTP protocol for the ADAE service shall have the resource URI structure as defined in clause 5.2.4 of 3GPP TS 29.122 [6]:

**{apiRoot}/<apiName>/<apiVersion>/<apiSpecificSuffixes>**

where:

- a) {apiRoot} shall be set as described in clause 5.2.4 of 3GPP TS 29.122 [6];
- b) <apiName> shall be "adae-sc";
- c) <apiVersion> shall be "v1"; and
- d) <apiSpecificSuffixes> shall be set as described in clause 7.1.3.

## 7.1.2 Usage of HTTP

### 7.1.2.1 General

For ADAE service configuration API, support of HTTP/1.1 (IETF RFC 9112 [13], IETF RFC 9110 [14] and IETF RFC 9111 [15]) over TLS is mandatory and support of HTTP/2 (IETF RFC 9113 [16]) over TLS is recommended.

A functional entity desiring to use HTTP/2 shall use the HTTP upgrade mechanism to negotiate applicable HTTP version as described in IETF RFC 9113 [16].

### 7.1.2.2 Content type

The bodies of HTTP request and successful HTTP responses shall be encoded in JSON format (see IETF RFC 8259 [17]).

The MIME media type that shall be used within the related Content-Type header field is "application/json", as defined in IETF RFC 8259 [17].

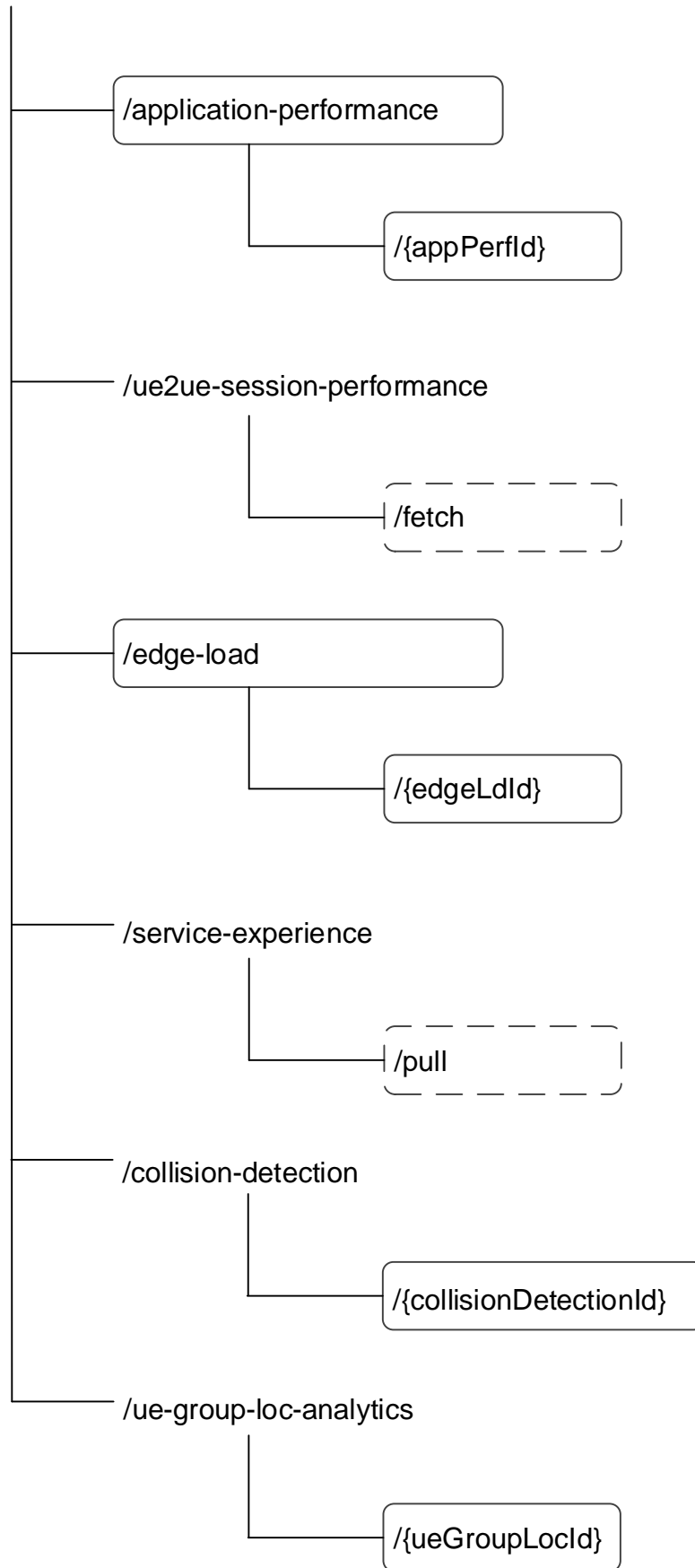
## 7.1.3 Resources

### 7.1.3.1 Overview

This clause describes the structure for the Resource URIs and the resources and methods used for the service.

Figure 7.1.3.1-1 depicts the resource URI structure of the ADAE\_ServiceConfiguration API.

{apiRoot}/adae-sc/<apiVersion>



### Figure 7.1.3.1-1: Resource URI structure of the ADAE\_ServiceConfiguration API

Table 7.1.3.1-1 provides an overview of the resources and applicable HTTP methods.

**Table 7.1.3.1-1: Resources and methods overview**

Resource name	Resource URI	HTTP method	Description
Application performance event subscription	/application-performance	POST	Subscription to the VAL performance analytics event.
Individual application performance event subscription	/application-performance/{appPerfId}	DELETE	Deletes an individual VAL performance analytics event.
UE-to-UE session performance analytics	/ue2ue-session-performance/fetch	fetch (POST)	Request for the UE-to-UE session performance analytics.
Edge load event subscription	/edge-load	POST	Subscription to the edge load data collection event.
Individual edge load event subscription	/edge-load/{edgeLdId}	DELETE	Deletes an individual edge load data collection subscription.
Service experience	/service-experience/pull	pull (POST)	Pull a service experience information report.
Collision detection analytics subscriptions	/collision-detection	POST	Creates an individual collision detection analytics subscription.
Individual collision detection analytics subscription	/collision-detection/{collisionDetectionId}	DELETE	Removes the individual collision detection analytics subscription.
Location-related UE group analytics subscriptions	/ue-group-loc-analytics	POST	Creates an individual location-related UE group analytics subscription.
Individual location-related UE group analytics subscription	/ue-group-loc-analytics/{ueGroupLocId}	DELETE	Removes the individual location-related UE group analytics subscription.

## 7.1.3.2 Resource: Application performance event subscription

### 7.1.3.2.1 Description

Application performance event subscription is used by the ADAES to subscribe to the ADAEC for the event of the VAL performance analytics.

### 7.1.3.2.2 Resource definition

Resource URI: {apiRoot}/adae-sc/<apiVersion>/application-performance

This resource shall support the resource URI variables defined in the table 7.1.3.2.2-1.

**Table 7.1.3.2.2-1: Resource URI variables for this resource**

Name	Data Type	Definition
apiRoot	string	See clause 5.2.4 in 3GPP TS 29.122 [6]

## 7.1.3.2.3 Resource standard methods

## 7.1.3.2.3.1 POST

This operation is for subscription to the VAL application performance analytics and shall support the URI query parameters specified in table 7.1.3.2.3.1-1.

**Table 7.1.3.2.3.1-1: URI query parameters supported by the POST method on this resource**

Name	Data type	P	Cardinality	Description	Applicability
n/a					

This method shall support the request data structures specified in table 7.1.3.2.3.1-2 and the response data structures and response codes specified in table 7.1.3.2.3.1-3.

**Table 7.1.3.2.3.1-2: Data structures supported by the POST Request Body on this resource**

Data type	P	Cardinality	Description
AppPerfSub	M	1	Subscription to the VAL performance analytics event

**Table 7.1.3.2.3.1-3: Data structures supported by the POST Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
AppPerfSub	M	1	201 Created	Subscription to the VAL performance analytics is created.
NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [6] shall also apply.				

**Table 7.1.3.2.3.1-4: Headers supported by the 201 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/adae-sc/<apiVersion>/application-performance/{appPerfId}

## 7.1.3.2.4 Resource custom operations

None.

## 7.1.3.3 Resource: Individual application performance event subscription

## 7.1.3.3.1 Description

The individual application performance event subscription resource represents an individual event subscription of the ADAES.

## 7.1.3.3.2 Resource Definition

Resource URI: {apiRoot}/adae-sc/<apiVersion>/application-performance/{appPerfId}

This resource shall support the resource URI variables defined in the table 7.1.3.3.2-1.

**Table 7.1.3.3.2-1: Resource URI variables for this resource**

Name	Data Type	Definition
apiRoot	string	See clause 5.2.4 in 3GPP TS 29.122 [6]
appPerfId	string	Identifies an application performance event subscription

### 7.1.3.3.3 Resource Standard Methods

#### 7.1.3.3.3.1 DELETE

This method shall support the URI query parameters specified in table 7.1.3.3.3.1-1.

**Table 7.1.3.3.3.1-1: URI query parameters supported by the DELETE method on this resource**

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 7.1.3.3.3.1-2 and the response data structures and response codes specified in table 7.1.3.3.3.1-3.

**Table 7.1.3.3.3.1-2: Data structures supported by the DELETE Request Body on this resource**

Data type	P	Cardinality	Description
n/a			

**Table 7.1.3.3.3.1-3: Data structures supported by the DELETE Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The individual application performance event subscription matching the appPerfId is deleted.
n/a			307 Temporary Redirect	Temporary redirection. The response shall include a Location header field containing an alternative URI of the resource located in an alternative ADAEC. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].
n/a			308 Permanent Redirect	Permanent redirection. The response shall include a Location header field containing an alternative URI of the resource located in an alternative ADAEC. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].

NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.6-1 of 3GPP TS 29.122 [6] also apply.

**Table 7.1.3.3.3.1-4: Headers supported by the 307 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI of the resource located in an alternative ADAEC.

**Table 7.1.3.3.3.1-5: Headers supported by the 308 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI of the resource located in an alternative ADAEC.

## 7.1.3.3.4 Resource Custom Operations

None.

## 7.1.3.4 Resource: UE-to-UE session performance analytics

## 7.1.3.4.1 Description

This resource is used by the ADAES to request the ADAEC for the UE-to-UE session performance analytics.

## 7.1.3.4.2 Resource definition

Resource URI: **{apiRoot}/adae-sc/<apiVersion>/ue2ue-session-performance**

This resource shall support the resource URI variables defined in the table 7.1.3.4.2-1.

**Table 7.1.3.4.2-1: Resource URI variables for this resource**

Name	Data Type	Definition
apiRoot	string	See clause 5.2.4 in 3GPP TS 29.122 [6]

## 7.1.3.4.3 Resource standard methods

None

## 7.1.3.4.4 Resource custom operations

## 7.1.3.4.4.1 Overview

**Table 7.1.3.4.4.1-1: Custom operations**

Operation name	Custom operation URI	Mapped HTTP method	Description
Fetch	/ue2ue-session-performance/fetch	POST	Request for the UE-to-UE session performance analytics

## 7.1.3.4.4.2 Fetch

This custom operation is for the ADAES to request the ADAEC the UE-to-UE session performance analytics and shall support the URI query parameters specified in table 7.1.3.4.4.2-1.

**Table 7.1.3.4.4.2-1: URI query parameters supported by the POST method on this resource**

Name	Data type	P	Cardinality	Description	Applicability
n/a					

This custom operation shall support the request data structures specified in table 7.1.3.4.4.2-2 and the response data structures and response codes specified in table 7.1.3.4.4.2-3.

**Table 7.1.3.4.4.2-2: Data structures supported by the POST Request Body on this resource**

Data type	P	Cardinality	Description
Ue2UePerfReq	M	1	ADAES requests ADAEC for the UE-to-UE session performance analytics

**Table 7.1.3.4.4.2-3: Data structures supported by the POST Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
Ue2UePerfResp	M	1	200 OK	ADAEC responses ADAES the UE-to-UE session performance analytics
n/a			307 Temporary Redirect	Temporary redirection. The response shall include a Location header field containing an alternative URI of the resource located in an alternative ADAEC. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].
n/a			308 Permanent Redirect	Permanent redirection. The response shall include a Location header field containing an alternative URI of the resource located in an alternative ADAEC. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].

NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [6] shall also apply.

**Table 7.1.3.4.4.2-4: Headers supported by the 307 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI of the resource located in an alternative ADAEC.

**Table 7.1.3.4.4.2-5: Headers supported by the 308 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI of the resource located in an alternative ADAEC.

### 7.1.3.5 Resource: Edge load data collection event subscription

#### 7.1.3.5.1 Description

Edge load data collection event subscription is used by the ADAES to subscribe to the ADAEC for the event of the edge load data collection.

#### 7.1.3.5.2 Resource definition

Resource URI: **{apiRoot}/adae-sc/<apiVersion>/edge-load**

This resource shall support the resource URI variables defined in the table 7.1.3.5.2-1.

**Table 7.1.3.5.2-1: Resource URI variables for this resource**

Name	Data Type	Definition
apiRoot	string	See clause 5.2.4 in 3GPP TS 29.122 [6]

#### 7.1.3.5.3 Resource standard methods

##### 7.1.3.5.3.1 POST

This method is the ADAES to subscribe to the ADAEC for the event of the edge-load data collection and shall support the URI query parameters specified in table 7.1.3.5.3.1-1.

**Table 7.1.3.5.3.1-1: URI query parameters supported by the POST method on this resource**

Name	Data type	P	Cardinality	Description	Applicability
n/a					

This method shall support the request data structures specified in table 7.1.3.5.3.1-2 and the response data structures and response codes specified in table 7.1.3.5.3.1-3.

**Table 7.1.3.5.3.1-2: Data structures supported by the POST Request Body on this resource**

Data type	P	Cardinality	Description
EdgeSub	M	1	Subscription to the edge load data collection event

**Table 7.1.3.5.2.3.1-3: Data structures supported by the POST Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
EdgeSub	M	1	201 Created	Subscription to the edge load data collection is created.
NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [6] shall also apply.				

**Table 7.1.3.5.2.3.1-4: Headers supported by the 201 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	String	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/adae-sc/<apiVersion>/edge-load/{edgeLdId}

#### 7.1.3.5.4 Resource custom operations

None.

#### 7.1.3.6 Resource: Individual edge load event subscription

##### 7.1.3.6.1 Description

The individual edge load event subscription resource represents an individual event subscription of the ADAE server.

##### 7.1.3.6.2 Resource Definition

Resource URI: {apiRoot}/adae-sc/<apiVersion>/edge-load/{edgeLdId}

This resource shall support the resource URI variables defined in the table 7.1.3.6.2-1.

**Table 7.1.3.6.2-1: Resource URI variables for this resource**

Name	Data Type	Definition
apiRoot	string	See clause 5.2.4 in 3GPP TS 29.122 [6]
edgeLdId	string	Identifies an edge load data collection event subscription

##### 7.1.3.6.3 Resource Standard Methods

###### 7.1.3.6.3.1 DELETE

This method shall support the URI query parameters specified in table 7.1.3.6.3.1-1.

**Table 7.1.3.6.3.1-1: URI query parameters supported by the DELETE method on this resource**

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 7.1.3.6.3.1-2 and the response data structures and response codes specified in table 7.1.3.6.3.1-3.

**Table 7.1.3.6.3.1-2: Data structures supported by the DELETE Request Body on this resource**

Data type	P	Cardinality	Description
n/a			

**Table 7.1.3.6.3.1-3: Data structures supported by the DELETE Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The individual edge load data collection event subscription matching the edgeLdId is deleted.
n/a			307 Temporary Redirect	Temporary redirection. The response shall include a Location header field containing an alternative URI of the resource located in an alternative ADAEC. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].
n/a			308 Permanent Redirect	Permanent redirection. The response shall include a Location header field containing an alternative URI of the resource located in an alternative ADAEC. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.6-1 of 3GPP TS 29.122 [6] also apply.				

**Table 7.1.3.6.3.1-4: Headers supported by the 307 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI of the resource located in an alternative ADAEC.

**Table 7.1.3.6.3.1-5: Headers supported by the 308 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI of the resource located in an alternative ADAEC.

#### 7.1.3.6.4 Resource Custom Operations

None.

#### 7.1.3.7 Resource: Service experience information

##### 7.1.3.7.1 Description

The resource is used by the ADAES to:

- a) pull the service experience information report from the ADAEC.

7.1.3.7.3.1 Void

7.1.3.7.4 Resource custom operations

7.1.3.7.4.1 Overview

**Table 7.1.3.7.4.1-1: Custom operations**

Operation name	Custom operation URI	Mapped HTTP method	Description
Pull	/service-experience/pull	POST	Pull a service experience information report

7.1.3.7.4.2 Void

7.1.3.7.4.3 Operation: PULL Service Experience Information

This operation is used by the ADAES to pull the service experience information report from the ADAEC and shall support the URI query parameters specified in table 7.1.3.7.4.3-1.

**Table 7.1.3.7.4.3-1: URI query parameters supported by the POST method on this resource**

Name	Data type	P	Cardinality	Description	Applicability
n/a					

This method shall support the request data structures specified in table 7.1.3.7.4.3-2 and the response data structures and response codes specified in table 7.1.3.7.4.3-3.

**Table 7.1.3.7.4.3-2: Data structures supported by the POST Request Body on this resource**

Data type	P	Cardinality	Description
PullSrvExpInfo	M	1	Request for the report on the service experience information

**Table 7.1.3.7.4.3-3: Data structures supported by the POST Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
SrvExpInfoRep	M	1	200 OK	Successfully obtaining the report on the service experience information
n/a			307 Temporary Redirect	Temporary redirection. The response shall include a Location header field containing an alternative URI of the resource located in an alternative ADAEC. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].
n/a			308 Permanent Redirect	Permanent redirection. The response shall include a Location header field containing an alternative URI of the resource located in an alternative ADAEC. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].

NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [6] shall also apply.

**Table 7.1.3.7.4.3-4: Headers supported by the 307 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI of the resource located in an alternative ADAEC.

**Table 7.1.3.7.4.3-5: Headers supported by the 308 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI of the resource located in an alternative ADAEC.

### 7.1.3.8 Void

### 7.1.3.9 Resource: Collision detection analytics subscriptions

#### 7.1.3.9.1 Description

Collision detection analytics subscription is used to subscribe to the ADAEC for the collision detection events.

#### 7.1.3.9.2 Resource definition

Resource URI: {apiRoot}/adae-sc/<apiVersion>/collision-detection

This resource shall support the resource URI variables defined in the table 7.1.3.9.2-1.

**Table 7.1.3.9.2-1: Resource URI variables for this resource**

Name	Data Type	Definition
apiRoot	string	See clause 5.2.4 in 3GPP TS 29.122 [6]

#### 7.1.3.9.3 Resource standard methods

##### 7.1.3.9.3.1 POST

This method is used for the subscription to the collision detection events and shall support the URI query parameters specified in table 7.1.3.9.3.1-1.

**Table 7.1.3.9.3.1-1: URI query parameters supported by the POST method on this resource**

Name	Data type	P	Cardinality	Description	Applicability
n/a					

This method shall support the request data structures specified in table 7.1.3.9.3.1-2 and the response data structures and response codes specified in table 7.1.3.9.3.1-3.

**Table 7.1.3.9.3.1-2: Data structures supported by the POST Request Body on this resource**

Data type	P	Cardinality	Description
CollisionDetectionSub	M	1	Subscription to the collision detection analytics.

**Table 7.1.3.9.2.3.1-3: Data structures supported by the POST Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
CollisionDetectionSub	M	1	201 Created	Subscription to the collision detection analytics is created.
NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [3] shall also apply.				

**Table 7.1.3.9.2.3.1-4: Headers supported by the 201 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/ss-adae-cda/<apiVersion>/collision-detection/{collisionDetectionId}

#### 7.1.3.9.4 Resource custom operations

None.

#### 7.1.3.10 Resource: Individual collision detection analytics subscription

##### 7.1.3.10.1 Description

The individual collision detection analytics subscription resource represents an individual subscription to the collision detection events.

##### 7.1.3.10.2 Resource Definition

Resource URI: {apiRoot}/adae-sc/<apiVersion>/collision-detection/{collisionDetectionId}

This resource shall support the resource URI variables defined in the table 7.1.3.10.2-1.

**Table 7.1.3.10.2-1: Resource URI variables for this resource**

Name	Data Type	Definition
apiRoot	string	See clause 5.2.4 in 3GPP TS 29.122 [6]
collisionDetectionId	string	Represents the identifier of an Individual collision detection analytics subscription.

#### 7.1.3.10.3 Resource Standard Methods

##### 7.1.3.10.3.1 DELETE

This method shall support the URI query parameters specified in table 7.1.3.10.3.1-1.

**Table 7.1.3.10.3.1-1: URI query parameters supported by the DELETE method on this resource**

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 7.1.3.10.3.1-2 and the response data structures and response codes specified in table 7.1.3.10.3.1-3.

**Table 7.1.3.10.3.1-2: Data structures supported by the DELETE Request Body on this resource**

Data type	P	Cardinality	Description
n/a			

**Table 7.1.3.10.3.1-3: Data structures supported by the DELETE Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The Individual collision detection analytics subscription matching the collisionDetectionId is deleted.
n/a			307 Temporary Redirect	Temporary redirection. The response shall include a Location header field containing an alternative URI of the resource located in an alternative ADAE Server. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3].
n/a			308 Permanent Redirect	Permanent redirection. The response shall include a Location header field containing an alternative URI of the resource located in an alternative ADAE Server. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3].
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.6-1 of 3GPP TS 29.122 [3] also apply.				

**Table 7.1.3.10.3.1-4: Headers supported by the 307 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI of the resource located in an alternative ADAE Server.

**Table 7.1.3.10.3.1-5: Headers supported by the 308 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI of the resource located in an alternative ADAE Server.

#### 7.1.3.10.4 Resource Custom Operations

None.

#### 7.1.3.11 Resource: Location-related UE group analytics subscriptions

##### 7.1.3.11.1 Description

Location-related UE group analytics event subscription is used to subscribe to the ADAEC for the location-related UE group analytics events.

##### 7.1.3.11.2 Resource definition

Resource URI: {apiRoot}/adae-sc/<apiVersion>/ue-group-loc-analytics

This resource shall support the resource URI variables defined in the table 7.1.3.11.2-1.

**Table 7.1.3.11.2-1: Resource URI variables for this resource**

Name	Data Type	Definition
apiRoot	string	See clause 5.2.4 in 3GPP TS 29.122 [6]

##### 7.1.3.11.3 Resource standard methods

###### 7.1.3.11.3.1 POST

This method is used for the subscription to the location-related UE group analytics events and shall support the URI query parameters specified in table 7.1.3.11.3.1-1.

**Table 7.1.3.11.3.1-1: URI query parameters supported by the POST method on this resource**

Name	Data type	P	Cardinality	Description	Applicability
n/a					

This method shall support the request data structures specified in table 7.1.3.11.3.1-2 and the response data structures and response codes specified in table 7.1.3.11.3.1-3.

**Table 7.1.3.11.3.1-2: Data structures supported by the POST Request Body on this resource**

Data type	P	Cardinality	Description
LocRelUeGroupSub	M	1	Subscription to the location-related UE group analytics.

**Table 7.1.3.11.2.3.1-3: Data structures supported by the POST Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
LocRelUeGroupSub	M	1	201 Created	Subscription to the location-related UE group analytics is created.
NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [3] shall also apply.				

**Table 7.1.3.11.2.3.1-4: Headers supported by the 201 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	String	M	1	Contains the URI of the newly created resource, according to the structure: {apiRoot}/adae-sc/<apiVersion>/ue-group-loc-analytics/{ueGroupLocId}

#### 7.1.3.11.4 Resource custom operations

None.

### 7.1.3.12 Resource: Individual location-related UE group analytics subscription

#### 7.1.3.12.1 Description

The individual location-related UE group analytics event subscription resource represents an individual subscription to the location-related UE group analytics events.

#### 7.1.3.12.2 Resource Definition

Resource URI: {apiRoot}/adae-sc/<apiVersion>/ue-group-loc-analytics/{ueGroupLocId}

This resource shall support the resource URI variables defined in the table 7.1.3.12.2-1.

**Table 7.1.3.12.2-1: Resource URI variables for this resource**

Name	Data Type	Definition
apiRoot	string	See clause 5.2.4 in 3GPP TS 29.122 [6]
ueGroupLocId	string	Represents the identifier of an Individual location-related UE group analytics subscription.

#### 7.1.3.12.3 Resource Standard Methods

##### 7.1.3.12.3.1 DELETE

This method shall support the URI query parameters specified in table 7.1.3.12.3.1-1.

**Table 7.1.3.12.3.1-1: URI query parameters supported by the DELETE method on this resource**

Name	Data type	P	Cardinality	Description
n/a				

This method shall support the request data structures specified in table 7.1.3.12.3.1-2 and the response data structures and response codes specified in table 7.1.3.12.3.1-3.

**Table 7.1.3.12.3.1-2: Data structures supported by the DELETE Request Body on this resource**

Data type	P	Cardinality	Description
n/a			

**Table 7.1.3.12.3.1-3: Data structures supported by the DELETE Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	The Individual location-related UE group analytics subscription matching the ueGroupLocId is deleted.
n/a			307 Temporary Redirect	Temporary redirection. The response shall include a Location header field containing an alternative URI of the resource located in an alternative ADAE Server. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3].
n/a			308 Permanent Redirect	Permanent redirection. The response shall include a Location header field containing an alternative URI of the resource located in an alternative ADAE Server. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3].
NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.6-1 of 3GPP TS 29.122 [3] also apply.				

**Table 7.1.3.12.3.1-4: Headers supported by the 307 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI of the resource located in an alternative ADAEC.

**Table 7.1.3.12.3.1-5: Headers supported by the 308 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI of the resource located in an alternative ADAEC.

#### 7.1.3.12.4 Resource Custom Operations

None.

## 7.1.4 Notifications

### 7.1.4.1 General

**Table 7.1.4.1-1: Notifications overview**

Notification	Callback URI	HTTP method	Description (service operation)
Application performance event notification	{notifUri}	POST	Notification for the VAL performance analytics event
Edge load event notification	{notifUri}	POST	Notification for the edge load data collection event
Service experience report event notification	{notifUri}	POST	Notification for the service experience report event
Collision detection analytics notification	{notifUri}	POST	Notification on collision detection analytics.
Location-related UE group analytics notification	{notifUri}	POST	Notification on location-related UE group analytics.

### 7.1.4.2 Application performance event notification

#### 7.1.4.2.1 Description

Application performance event notification is by the ADAEC to notify the ADAES, the VAL performance analytics.

#### 7.1.4.2.2 Notification definition

The POST method shall be used for the event notification and the callback URI shall be the one provided by the consumer during the subscription to the event.

Callback URI: {**notifUri**}

This method shall support the URI query parameters specified in table 7.1.4.2.2-1.

**Table 7.1.4.2.2-1: URI query parameters supported by the POST method on this resource**

Name	Data type	P	Cardinality	Description
n/a				

If the notification is on the VAL performance analytics, this method shall support the request data structures specified in table 7.1.4.2.2-2 and the response data structures and response codes specified in table 7.1.4.2.2-3.

**Table 7.1.4.2.2-2: Data structures supported by the POST Request Body on this resource**

Data type	P	Cardinality	Description
AppPerfNotif	M	1	Notification information of the VAL performance analytics.

**Table 7.1.4.2.2-3: Data structures supported by the POST Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Notification for the VAL performance analytics event is accepted.
n/a			307 Temporary Redirect	Temporary redirection, during event notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative ADAES where the notification should be sent. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].
n/a			308 Permanent Redirect	Permanent redirection, during event notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative ADAES where the notification should be sent. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].
NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [6] shall also apply.				

**Table 7.1.4.2.2-4: Headers supported by the 307 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI representing the end point of an alternative ADAES towards which the notification should be redirected.

**Table 7.1.4.2.2-5: Headers supported by the 308 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI representing the end point of an alternative ADAES towards which the notification should be redirected.

### 7.1.4.3 Edge load event notification

#### 7.1.4.3.1 Description

The edge load event notification is used by the ADAEC to notify the ADAES, the edge load data collection.

#### 7.1.4.3.2 Notification definition

The POST method shall be used for the event notification and the callback URI shall be the one provided by the consumer during the subscription to the event.

Callback URI: {notifUri}

This method shall support the URI query parameters specified in table 7.1.4.3.2-1.

**Table 7.1.4.3.2-1: URI query parameters supported by the POST method on this resource**

Name	Data type	P	Cardinality	Description
n/a				

If the notification is on the edge load data collection, this method shall support the request data structures specified in table 7.1.4.3.2-2 and the response data structures and response codes specified in table 7.1.4.3.2-3.

**Table 7.1.4.3.2-2: Data structures supported by the POST Request Body on this resource**

Data type	P	Cardinality	Description
EdgeNotif	M	1	Notification information of edge load data collection event

**Table 7.1.4.3.2-3: Data structures supported by the POST Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Notification for the edge load data collection event is accepted.
n/a			307 Temporary Redirect	Temporary redirection, during event notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative ADAES where the notification should be sent. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].
n/a			308 Permanent Redirect	Permanent redirection, during event notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative ADAES where the notification should be sent. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].

NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [6] shall also apply.

**Table 7.1.4.3.2-4: Headers supported by the 307 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI representing the end point of an alternative ADAES towards which the notification should be redirected.

**Table 7.1.4.3.2-5: Headers supported by the 308 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI representing the end point of an alternative ADAES towards which the notification should be redirected.

## 7.1.4.4 Service experience information report event notification

### 7.1.4.4.1 Description

The service experience information report event notification is used by the ADAEC to notify the ADAES, the service experience information.

### 7.1.4.4.2 Notification definition

The POST method shall be used for the event notification and the callback URI shall be the one provided by the consumer during the subscription to the event.

Callback URI: {notifUri}

This method shall support the URI query parameters specified in table 7.1.4.4.2-1.

**Table 7.1.4.4.2-1: URI query parameters supported by the POST method on this resource**

Name	Data type	P	Cardinality	Description
n/a				

If the notification is on the service experience information, this method shall support the request data structures specified in table 7.1.4.4.2-2 and the response data structures and response codes specified in table 7.1.4.4.2-3.

**Table 7.1.4.4.2-2: Data structures supported by the POST Request Body on this resource**

Data type	P	Cardinality	Description
SrvExpInfoRep	M	1	Notification of service experience information report

**Table 7.1.4.4.2-3: Data structures supported by the POST Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
n/a	M	1	204 (No Content)	Notification of the service experience information report is accepted.
n/a			307 Temporary Redirect	Temporary redirection, during event notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative ADAES where the notification should be sent. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].
n/a			308 Permanent Redirect	Permanent redirection, during event notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative ADAES where the notification should be sent. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [6].
NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [6] shall also apply.				

**Table 7.1.4.4.2-4: Headers supported by the 307 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI representing the end point of an alternative ADAES towards which the notification should be redirected.

**Table 7.1.4.4.2-5: Headers supported by the 308 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI representing the end point of an alternative ADAES towards which the notification should be redirected.

## 7.1.4.5 Collision detection analytics notification

### 7.1.4.5.1 Description

The collision detection analytics notification is used by the ADAEC to notify about the collision detection events.

### 7.1.4.5.2 Notification definition

The POST method shall be used for the event notification and the callback URI shall be the one provided by the consumer during the subscription to the event.

Callback URI: {**notifUri**}

This method shall support the URI query parameters specified in table 7.1.4.5.2-1.

**Table 7.1.4.5.2-1: URI query parameters supported by the POST method on this resource**

Name	Data type	P	Cardinality	Description
n/a				

If the notification is on the collision detection, this method shall support the request data structures specified in table 7.1.4.5.2-2 and the response data structures and response codes specified in table 7.1.4.5.2-3.

**Table 7.1.4.5.2-2: Data structures supported by the POST Request Body on this resource**

Data type	P	Cardinality	Description
CollisionDetectionNotif	M	1	Notification information of collision detection analytics.

**Table 7.1.4.5.2-3: Data structures supported by the POST Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Notification for the collision detection analytics is accepted.
n/a			307 Temporary Redirect	Temporary redirection, during notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative notification destination where the notification should be sent. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3].
n/a			308 Permanent Redirect	Permanent redirection, during notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative notification destination where the notification should be sent. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3].
NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.7.1-1 of 3GPP TS 29.122 [3] shall also apply.				

**Table 7.1.4.5.2-4: Headers supported by the 307 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI representing the end point of an alternative ADAES towards which the notification should be redirected.

**Table 7.1.4.5.2-5: Headers supported by the 308 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI representing the end point of an alternative ADAES towards which the notification should be redirected.

## 7.1.4.6 Location-related UE group analytics notification

### 7.1.4.6.1 Description

The location-related UE group analytics event notification is used by the ADAEC to notify about the location-related UE group analytics events.

## 7.1.4.6.2 Notification definition

The POST method shall be used for the event notification and the callback URI shall be the one provided by the consumer during the subscription to the event.

Callback URI: {notifUri}

This method shall support the URI query parameters specified in table 7.1.4.6.2-1.

**Table 7.1.4.6.2-1: URI query parameters supported by the POST method on this resource**

Name	Data type	P	Cardinality	Description
n/a				

If the notification is on the location-related UE group analytics, this method shall support the request data structures specified in table 7.1.4.6.2-2 and the response data structures and response codes specified in table 7.1.4.6.2-3.

**Table 7.1.4.6.2-2: Data structures supported by the POST Request Body on this resource**

Data type	P	Cardinality	Description
LocRelUeGroupNotif	M	1	Notification information of location-related UE group analytics.

**Table 7.1.4.6.2-3: Data structures supported by the POST Response Body on this resource**

Data type	P	Cardinality	Response codes	Description
n/a			204 No Content	Notification for the location-related UE group analytics is accepted.
n/a			307 Temporary Redirect	Temporary redirection, during notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative notification destination where the notification should be sent. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3].
n/a			308 Permanent Redirect	Permanent redirection, during notification. The response shall include a Location header field containing an alternative URI representing the end point of an alternative notification destination where the notification should be sent. Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3].
NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.7.1-1 of 3GPP TS 29.122 [3] shall also apply.				

**Table 7.1.4.6.2-4: Headers supported by the 307 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI representing the end point of an alternative ADAES towards which the notification should be redirected.

**Table 7.1.4.6.2-5: Headers supported by the 308 Response Code on this resource**

Name	Data type	P	Cardinality	Description
Location	string	M	1	An alternative URI representing the end point of an alternative ADAES towards which the notification should be redirected.

## 7.1.5 Data model

### 7.1.5.1 General

This clause specifies the application data model supported by the API.

Table 7.1.5.1-1 specifies the data types defined for the ADAE\_ServiceConfiguration API.

**Table 7.1.5.1-1: ADAE\_ServiceConfiguration API specific Data Types**

Data type	Clause defined	Description	Applicability
DataCollectReq	7.1.5.2.9	Contains data collection requirements.	
PullSrvExpInfo	7.1.5.2.6	Pull an individual service experience information	
SrvExpInfoRep	7.1.5.2.7	Response to pull an individual service experience information	
Ue2UePerfReq	7.1.5.2.2	Request for the UE-to-UE session performance analytics	
Ue2UePerfResp	7.1.5.2.3	Response for the UE-to-UE session performance analytics	
Ue2UeRepThreshold	7.1.5.2.8	Represents reporting threshold.	

Table 7.1.5.1-2 specifies data types re-used by the ADAE\_ServiceConfiguration API service.

**Table 7.1.5.1-2: Re-used Data Types**

Data type	Reference	Comments	Applicability
AppPerfSub	3GPP TS 29.549 [9]	Subscription to the VAL application performance analytics	
AppPerfNotif	3GPP TS 29.549 [9]	Notification information of the application performance analytics.	
CollisionDetectionNotif	3GPP TS 29.549 [9]	Represents the collision detection analytics notification.	
CollisionDetectionSub	3GPP TS 29.549 [9]	Represents the collision detection analytics subscription.	
DurationSec	3GPP TS 29.122 [6]	Represent the time interval between successive location reports.	
EdgeSub	3GPP TS 29.549 [9]	Subscription to the edge load analytics event	
EdgeNotif	3GPP TS 29.549 [9]	Notification information of the edge load analytics event.	
LocationArea	3GPP TS 29.122 [6]	Represents location information.	
LocRelUeGroupNotif	3GPP TS 29.549 [9]	Represents the location-related UE group analytics notification.	
LocRelUeGroupSub	3GPP TS 29.549 [9]	Represents the location-related UE group analytics subscription.	
MatchingDirection	3GPP TS 29.520 [18]	Used to indicate a threshold matching direction.	
Pc5QoSPara	3GPP TS 29.571 [10]	Represents policy data on the PC5 QoS parameters.	
ReportingInformation	3GPP TS 29.523 [8]	Indicates the reporting requirement.	
SupportedFeatures	3GPP TS 29.571 [10]	Used to negotiate the applicability of the optional features defined in table 7.1.7-1.	
TimeWindow	3GPP TS 29.122 [6]	Represents a start time and a stop time of a time window	
U2UAnalytics	3GPP TS 29.549 [9]	Indicates the list of the requested analytics.	
ValTargetUe	3GPP TS 29.549 [9]	Used to indicate either VAL User ID or VAL UE ID.	

## 7.1.5.2 Structured data types

### 7.1.5.2.1 Introduction

This clause defines the structures to be used in resource representations.

### 7.1.5.2.2 Type: Ue2UePerfReq

**Table 7.1.5.2.2-1: Definition of type Ue2UePerfReq**

Attribute name	Data type	P	Cardinality	Description	Applicability
serverId	string	M	1	Identity of the ADAES	
analyticsId	string	M	1	Identity of the UE-to-UE session analytics	
valUeIds	array(ValTargetUe)	M	1..N	One or more VAL UEs, for which the UE-to-UE session performance analytics, is requested.	
pc5Qos	Pc5QoSPara	M	1	The QoS attributes to be analysed at the ADAEC during UE-to-UE session.	
reportConfig	ReportingInformation	O	0..1	The configuration of UE-to-UE session performance analytics reporting.	
repThresholds	array(Ue2UeRepThreshold)	C	1..N	Identifies reporting threshold corresponding to the analytics. (NOTE 1)	
dataAbstractReq	boolean	O	0..1	Indicates whether the data abstraction is required. (NOTE 2)  true: required; false: not required (default).	
dataCollectReq	DataCollectReq	O	0..1	Contains data collection requirements.	
area	LocationArea	O	0..1	The geographical or service area, for which the UE-to-UE session performance analytics is requested.	
timeWindow	TimeWindow	O	0..1	The time window as the start time point and the end time point, for which the UE-to-UE session performance analytics is applied.	
suppFeat	SupportedFeatures	O	0..1	Indicates the list of supported features used as described in clause 7.1.7.	
NOTE 1: This attribute shall be provided only if the "reportConfig" attribute is present and the "notifMethod" attribute within the ReportingInformation data type provided in the "reportConfig" attribute is set to value "ON_EVENT_DETECTION".					
NOTE 2: This attribute may be provided only if the "reportConfig" attribute is present.					

### 7.1.5.2.3 Type: Ue2UePerfResp

**Table 7.1.5.2.-1: Definition of type Ue2UePerfResp**

Attribute name	Data type	P	Cardinality	Description	Applicability
dataOutputs	array(string)	M	1..N	UE-to-UE session performance analytics for prediction or statistics depending on the type and on the requested QoS parameter based on the analytics event.	
valUeIds	array(ValTargetUe)	M	1..N	One or more VAL UEs, for which the UE-to-UE session performance analytics applies.	
analyticsId	string	O	0..1	Identity of the UE-to-UE session analytics	
suppFeat	SupportedFeatures	O	0..1	Indicates the list of supported features used as described in clause 7.1.7.	

7.1.5.2.4 Void

7.1.5.2.5 Void

7.1.5.2.6 Type: PullSrvExpInfo

**Table 7.1.5.2.6-1: Definition of type PullSrvExpInfo**

Attribute name	Data type	P	Cardinality	Description	Applicability
valServerId	string	M	1	Identity of the VAL server, for which the service experience information report is requested.	
valServiceId	string	O	0..1	Identity of the VAL service	

7.1.5.2.7 Type: SrvExpInfoRep

**Table 7.1.5.2.7-1: Definition of type SrvExpInfoRep**

Attribute name	Data type	P	Cardinality	Description	Applicability
valUeId	ValTargetUe	M	1	Identity of VAL UE	
valServerId	string	M	1	Identity of the VAL server, for which the service experience information report is requested.	
valServiceId	string	O	0..1	Identity of the VAL service	
timeStamp	DurationSec	O	0..1	Timestamp as start time and end time of the collected report	
valSrvExpRep	ReportingInformation	O	0..1	Report on the VAL service experience information	

7.1.5.2.8 Type: Ue2UeRepThreshold

**Table 7.1.5.2.8-1: Definition of type Ue2UeRepThreshold**

Attribute name	Data type	P	Cardinality	Description	Applicability
thrName	U2UAnalytics	M	1	Indicates the name of the analytics threshold.	
thrValue	string	M	1	Indicates the value for the analytics threshold.	
thrMatchDirect	MatchingDirection	M	1	Indicates the threshold matching direction for the analytics threshold provided in the "thrValue" attribute.	

7.1.5.2.9 Type: DataCollectReq

**Table 7.1.5.2.9-1: Definition of type DataCollectReq**

Attribute name	Data type	P	Cardinality	Description	Applicability
dataFormat	string	M	1	Indicates the format of the requested data.	
repPeriod	DurationSec	O	0..1	Indicates the time interval between successive reportings.	
abstractLevel	string	O	0..1	Indicates the desired level of abstraction of the requested data.	
accuracyLevel	UInteger	O	0..1	Indicates the desired level of accuracy of the requested data. Minimum = 0. Maximum = 100.	

### 7.1.5.3 Simple data types and enumerations

#### 7.1.5.3.1 Introduction

This clause defines simple data types and enumerations that can be referenced from data structures defined in the previous clauses.

#### 7.1.5.3.2 Simple data types

None.

#### 7.1.5.3.3 Void

### 7.1.6 Error Handling

#### 7.1.6.1 General

HTTP error handling shall be supported as specified in clause 5.2.6 of 3GPP TS 29.122 [4].

In addition, the requirements in the following clauses shall apply.

#### 7.1.6.2 Protocol Errors

In this release of the specification, there are no additional protocol errors applicable for the ADAE\_ServiceConfiguration API.

#### 7.1.6.3 Application Errors

The application errors defined for ADAE\_ServiceConfiguration API are listed in table 7.1.6.3-1.

**Table 7.1.6.3-1: Application errors**

Application Error	HTTP status code	Description	Applicability

### 7.1.7 Feature Negotiation

General feature negotiation procedures are defined in clause 5.2.7 of 3GPP TS 29.122 [6]. Table 7.1.7-1 lists the supported features for ADAE\_ServiceConfiguration API.

**Table 7.1.7-1: Supported Features**

Feature number	Feature Name	Description
----------------	--------------	-------------

---

## 8 Usage of common API framework

### 8.1 General

Usage of common API framework shall be supported by the ADAE service configuration API as described in clause 8 in 3GPP TS 29.549 [9].

---

## 9 Security

### 9.1 General

Usage of HTTP over TLS and the TLS profiles shall be as specified in clause 5.1.1.4 of 3GPP TS 33.434 [11].

# Annex A (normative): OpenAPI specification

## A.1 General

This Annex specifies the formal definition of the API(s) defined in the present specification. It consists of OpenAPI specifications in YAML format.

This annex shall take precedence when being discrepant to other parts of the specification with respect to the encoding of information elements and methods within the API(s).

NOTE 2: The semantics and procedures, as well as conditions, e.g. for the applicability and allowed combinations of attributes or values, not expressed in the OpenAPI definitions but defined in other parts of the specification also apply.

Informative copies of the OpenAPI specification files contained in this 3GPP Technical Specification are available on a Git-based repository that uses the GitLab software version control system (see clause 5.3.1 of the 3GPP TS 29.501 [7] and clause 5B of the 3GPP TR 21.900 [1] for further information).

## A.2 ADAE\_ServiceConfiguration API

```

openapi: 3.0.0

info:
  title: ADAE_ServiceConfiguration
  version: 1.1.0-alpha.4
  description: |
    API for ADAE service configuration.
    © 2025, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).
    All rights reserved.

externalDocs:
  description: >
    3GPP TS 24.559 V19.3.0 Application Data Analytics Enablement Service; Stage 3.
  url: https://www.3gpp.org/ftp/Specs/archive/24_series/24.559/

security:
- {}
- oAuth2ClientCredentials: []

servers:
- url: '{apiRoot}/adae-sc/v1'
  variables:
    apiRoot:
      default: https://example.com
      description: apiRoot as defined in clause 5.2.4 of 3GPP TS 29.122.

paths:
  /application-performance:
    post:
      description: >
        Creates a new individual VAL performance analytics event subscription.
      operationId: VALPerformanceSubscription
      tags:
      - VAL performance event subscriptions (Collection)
      requestBody:
        required: true
        content:
          application/json:
            schema:
              $ref: 'TS29549_SS_ADAE_VALPerformanceAnalytics.yaml#/components/schemas/AppPerfSub'
      callbacks:
        notificationUri:
          '{$request.body#/notifUri}':
            post:
              requestBody:
                required: true

```

```

    content:
      application/json:
        schema:
          $ref:
'TS29549_SS_ADAE_VALPerformanceAnalytics.yaml#/components/schemas/AppPerfNotif'
  responses:
    '204':
      description: No Content (successful notification)
    '307':
      $ref: 'TS29122_CommonData.yaml#/components/responses/307'
    '308':
      $ref: 'TS29122_CommonData.yaml#/components/responses/308'
    '400':
      $ref: 'TS29122_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29122_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29122_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29122_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29122_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29122_CommonData.yaml#/components/responses/413'
    '415':
      $ref: 'TS29122_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29122_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29122_CommonData.yaml#/components/responses/500'
    '503':
      $ref: 'TS29122_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29122_CommonData.yaml#/components/responses/default'
  responses:
    '201':
      description: VAL performance event subscription resource created successfully.
      content:
        application/json:
          schema:
            $ref: 'TS29549_SS_ADAE_VALPerformanceAnalytics.yaml#/components/schemas/AppPerfSub'
      headers:
        Location:
          description: Contains the URI of the newly created resource.
          required: true
          schema:
            type: string
    '400':
      $ref: 'TS29122_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29122_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29122_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29122_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29122_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29122_CommonData.yaml#/components/responses/413'
    '415':
      $ref: 'TS29122_CommonData.yaml#/components/responses/415'
    '429':
      $ref: 'TS29122_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29122_CommonData.yaml#/components/responses/500'
    '503':
      $ref: 'TS29122_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29122_CommonData.yaml#/components/responses/default'
/application-performance/{appPerfId}:
  delete:
    description: Deletes an individual VAL performance event subscription.
    operationId: DeleteIndValPerfEventSubsc
    tags:
      - Individual VAL performance event subscription
    parameters:
      - name: appPerfId

```

```

    in: path
    description: Identifier of an individual VAL performance event subscription.
    required: true
    schema:
      type: string
  responses:
    '204':
      description: >
        The individual VAL performance subscription matching the appPerfId is deleted.
    '307':
      $ref: 'TS29122_CommonData.yaml#/components/responses/307'
    '308':
      $ref: 'TS29122_CommonData.yaml#/components/responses/308'
    '400':
      $ref: 'TS29122_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29122_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29122_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29122_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29122_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29122_CommonData.yaml#/components/responses/500'
    '503':
      $ref: 'TS29122_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29122_CommonData.yaml#/components/responses/default'

/ue2ue-session-performance/fetch:
  post:
    description: >
      Obtain the UE-to-UE session performance analytics.
    operationId: FetchUe2UeSessionPerformance
    tags:
      - Fetch UE-to-UE session performance analytics
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/Ue2UePerfReq'
    responses:
      '200':
        description: >
          Successful case. The UE-to-UE session performance information is returned in
          the response body.
        content:
          application/json:
            schema:
              $ref: '#/components/schemas/Ue2UePerfResp'
      '307':
        $ref: 'TS29122_CommonData.yaml#/components/responses/307'
      '308':
        $ref: 'TS29122_CommonData.yaml#/components/responses/308'
      '400':
        $ref: 'TS29122_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29122_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29122_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29122_CommonData.yaml#/components/responses/404'
      '411':
        $ref: 'TS29122_CommonData.yaml#/components/responses/411'
      '413':
        $ref: 'TS29122_CommonData.yaml#/components/responses/413'
      '415':
        $ref: 'TS29122_CommonData.yaml#/components/responses/415'
      '429':
        $ref: 'TS29122_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29122_CommonData.yaml#/components/responses/500'
      '503':
        $ref: 'TS29122_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29122_CommonData.yaml#/components/responses/default'

```

```

/edge-load:
  post:
    description: >
      Creates a new individual edge load data collection event subscription.
    operationId: EdgeLoadDataCollectionSubscription
    tags:
      - Edge load data collection event subscriptions (Collection)
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref: 'TS29549_SS_ADAE_EdgeLoadAnalytics.yaml#/components/schemas/EdgeSub'
    callbacks:
      notificationUri:
        '{$request.body#/notifUri}':
          post:
            requestBody:
              required: true
              content:
                application/json:
                  schema:
                    $ref: 'TS29549_SS_ADAE_EdgeLoadAnalytics.yaml#/components/schemas/EdgeNotif'
    responses:
      '204':
        description: No Content (successful notification)
      '307':
        $ref: 'TS29122_CommonData.yaml#/components/responses/307'
      '308':
        $ref: 'TS29122_CommonData.yaml#/components/responses/308'
      '400':
        $ref: 'TS29122_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29122_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29122_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29122_CommonData.yaml#/components/responses/404'
      '411':
        $ref: 'TS29122_CommonData.yaml#/components/responses/411'
      '413':
        $ref: 'TS29122_CommonData.yaml#/components/responses/413'
      '415':
        $ref: 'TS29122_CommonData.yaml#/components/responses/415'
      '429':
        $ref: 'TS29122_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29122_CommonData.yaml#/components/responses/500'
      '503':
        $ref: 'TS29122_CommonData.yaml#/components/responses/503'
      default:
        $ref: 'TS29122_CommonData.yaml#/components/responses/default'
  responses:
    '201':
      description: Edge load data collection event subscription resource created successfully.
      content:
        application/json:
          schema:
            $ref: 'TS29549_SS_ADAE_EdgeLoadAnalytics.yaml#/components/schemas/EdgeSub'
      headers:
        Location:
          description: Contains the URI of the newly created resource.
          required: true
          schema:
            type: string
    '400':
      $ref: 'TS29122_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29122_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29122_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29122_CommonData.yaml#/components/responses/404'
    '411':
      $ref: 'TS29122_CommonData.yaml#/components/responses/411'
    '413':
      $ref: 'TS29122_CommonData.yaml#/components/responses/413'

```

```

'415':
  $ref: 'TS29122_CommonData.yaml#/components/responses/415'
'429':
  $ref: 'TS29122_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29122_CommonData.yaml#/components/responses/500'
'503':
  $ref: 'TS29122_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29122_CommonData.yaml#/components/responses/default'

/edge-load/{edgeLdId}:
delete:
  description: Deletes an individual edge load data collection event subscription.
  operationId: DeleteIndEdgeLdDataCollectEventSubsc
  tags:
    - Individual edge load data collection event subscription
  parameters:
    - name: edgeLdId
      in: path
      description: Identifier of an individual edge load data collection event subscription.
      required: true
      schema:
        type: string
  responses:
    '204':
      description: >
        The individual edge load data collection subscription matching the edgeLdId is deleted.
    '307':
      $ref: 'TS29122_CommonData.yaml#/components/responses/307'
    '308':
      $ref: 'TS29122_CommonData.yaml#/components/responses/308'
    '400':
      $ref: 'TS29122_CommonData.yaml#/components/responses/400'
    '401':
      $ref: 'TS29122_CommonData.yaml#/components/responses/401'
    '403':
      $ref: 'TS29122_CommonData.yaml#/components/responses/403'
    '404':
      $ref: 'TS29122_CommonData.yaml#/components/responses/404'
    '429':
      $ref: 'TS29122_CommonData.yaml#/components/responses/429'
    '500':
      $ref: 'TS29122_CommonData.yaml#/components/responses/500'
    '503':
      $ref: 'TS29122_CommonData.yaml#/components/responses/503'
    default:
      $ref: 'TS29122_CommonData.yaml#/components/responses/default'

/service-experience/pull:
post:
  description: >
    ADAE server pulls service experience report from the ADAE client.
  operationId: PullSrvExpReport
  tags:
    - Pull service experienec report
  requestBody:
    required: true
    content:
      application/json:
        schema:
          $ref: '#/components/schemas/PullSrvExpInfo'
  responses:
    '200':
      description: >
        Successful case. The ADAE client provides service experience reporting information
        to the ADAE server.
      content:
        application/json:
          schema:
            $ref: '#/components/schemas/SrvExpInfoRep'
    '307':
      $ref: 'TS29122_CommonData.yaml#/components/responses/307'
    '308':
      $ref: 'TS29122_CommonData.yaml#/components/responses/308'
    '400':
      $ref: 'TS29122_CommonData.yaml#/components/responses/400'
    '401':

```

```

    $ref: 'TS29122_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29122_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29122_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29122_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29122_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29122_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29122_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29122_CommonData.yaml#/components/responses/500'
  '503':
    $ref: 'TS29122_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29122_CommonData.yaml#/components/responses/default'

/collision-detection:
  post:
    description: >
      Creates an individual collision detection analytics subscription.
    operationId: CollisionDetAnalyticsSubsc
    tags:
      - Collision detection analytics subscriptions (Collection)
    requestBody:
      required: true
      content:
        application/json:
          schema:
            $ref:
'TS29549_SS_ADAE_CollisionDetectionAnalytics.yaml#/components/schemas/CollisionDetectionSub'
    callbacks:
      notificationUri:
        '{$request.body#/notifUri}':
          post:
            requestBody:
              required: true
              content:
                application/json:
                  schema:
                    $ref:
'TS29549_SS_ADAE_CollisionDetectionAnalytics.yaml#/components/schemas/CollisionDetectionNotif'
      responses:
        '204':
          description: No Content (successful notification)
        '307':
          $ref: 'TS29122_CommonData.yaml#/components/responses/307'
        '308':
          $ref: 'TS29122_CommonData.yaml#/components/responses/308'
        '400':
          $ref: 'TS29122_CommonData.yaml#/components/responses/400'
        '401':
          $ref: 'TS29122_CommonData.yaml#/components/responses/401'
        '403':
          $ref: 'TS29122_CommonData.yaml#/components/responses/403'
        '404':
          $ref: 'TS29122_CommonData.yaml#/components/responses/404'
        '411':
          $ref: 'TS29122_CommonData.yaml#/components/responses/411'
        '413':
          $ref: 'TS29122_CommonData.yaml#/components/responses/413'
        '415':
          $ref: 'TS29122_CommonData.yaml#/components/responses/415'
        '429':
          $ref: 'TS29122_CommonData.yaml#/components/responses/429'
        '500':
          $ref: 'TS29122_CommonData.yaml#/components/responses/500'
        '503':
          $ref: 'TS29122_CommonData.yaml#/components/responses/503'
        default:
          $ref: 'TS29122_CommonData.yaml#/components/responses/default'

responses:
  '201':
    description: Collision detection analytics subscription resource created successfully.
    content:

```

```

    application/json:
      schema:
        $ref:
' TS29549_SS_ADAE_CollisionDetectionAnalytics.yaml#/components/schemas/CollisionDetectionSub'
      headers:
        Location:
          description: Contains the URI of the newly created resource.
          required: true
          schema:
            type: string
'400':
  $ref: 'TS29122_CommonData.yaml#/components/responses/400'
'401':
  $ref: 'TS29122_CommonData.yaml#/components/responses/401'
'403':
  $ref: 'TS29122_CommonData.yaml#/components/responses/403'
'404':
  $ref: 'TS29122_CommonData.yaml#/components/responses/404'
'411':
  $ref: 'TS29122_CommonData.yaml#/components/responses/411'
'413':
  $ref: 'TS29122_CommonData.yaml#/components/responses/413'
'415':
  $ref: 'TS29122_CommonData.yaml#/components/responses/415'
'429':
  $ref: 'TS29122_CommonData.yaml#/components/responses/429'
'500':
  $ref: 'TS29122_CommonData.yaml#/components/responses/500'
'503':
  $ref: 'TS29122_CommonData.yaml#/components/responses/503'
default:
  $ref: 'TS29122_CommonData.yaml#/components/responses/default'

/collision-detection/{collisionDetectionId}:
  delete:
    description: Removes the individual collision detection analytics subscription.
    operationId: DeleteIndCollisionDetAnalyticsSubsc
    tags:
      - Individual collision detection analytics subscription
    parameters:
      - name: collisionDetectionId
        in: path
        description: Identifier of an individual collision detection analytics subscription.
        required: true
        schema:
          type: string
    responses:
      '204':
        description: >
          The Individual collision detection analytics subscription matching the
          collisionDetectionId is deleted.
      '307':
        $ref: 'TS29122_CommonData.yaml#/components/responses/307'
      '308':
        $ref: 'TS29122_CommonData.yaml#/components/responses/308'
      '400':
        $ref: 'TS29122_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29122_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29122_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29122_CommonData.yaml#/components/responses/404'
      '429':
        $ref: 'TS29122_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29122_CommonData.yaml#/components/responses/500'
      '503':
        $ref: 'TS29122_CommonData.yaml#/components/responses/503'
      default:
        $ref: 'TS29122_CommonData.yaml#/components/responses/default'

/ue-group-loc-analytics:
  post:
    description: >
      Creates an individual location-related UE group analytics subscription.
    operationId: LocRelUeGroupSubscription
    tags:

```

```

- Location-related UE group analytics subscriptions (Collection)
requestBody:
  required: true
  content:
    application/json:
      schema:
        $ref:
'TS29549_SS_ADAE_LocationRelatedUeGroupAnalytics.yaml#/components/schemas/LocRelUeGroupSub'
callbacks:
  notificationUri:
    '{$request.body#/notifUri}':
      post:
        requestBody:
          required: true
          content:
            application/json:
              schema:
                $ref:
'TS29549_SS_ADAE_LocationRelatedUeGroupAnalytics.yaml#/components/schemas/LocRelUeGroupNotif'
responses:
  '204':
    description: No Content (successful notification)
  '307':
    $ref: 'TS29122_CommonData.yaml#/components/responses/307'
  '308':
    $ref: 'TS29122_CommonData.yaml#/components/responses/308'
  '400':
    $ref: 'TS29122_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29122_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29122_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29122_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29122_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29122_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29122_CommonData.yaml#/components/responses/415'
  '429':
    $ref: 'TS29122_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29122_CommonData.yaml#/components/responses/500'
  '503':
    $ref: 'TS29122_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29122_CommonData.yaml#/components/responses/default'
responses:
  '201':
    description: >
      The location-related UE group analytics subscription resource created successfully.
    content:
      application/json:
        schema:
          $ref:
'TS29549_SS_ADAE_LocationRelatedUeGroupAnalytics.yaml#/components/schemas/LocRelUeGroupSub'
headers:
  Location:
    description: Contains the URI of the newly created resource.
    required: true
    schema:
      type: string
  '400':
    $ref: 'TS29122_CommonData.yaml#/components/responses/400'
  '401':
    $ref: 'TS29122_CommonData.yaml#/components/responses/401'
  '403':
    $ref: 'TS29122_CommonData.yaml#/components/responses/403'
  '404':
    $ref: 'TS29122_CommonData.yaml#/components/responses/404'
  '411':
    $ref: 'TS29122_CommonData.yaml#/components/responses/411'
  '413':
    $ref: 'TS29122_CommonData.yaml#/components/responses/413'
  '415':
    $ref: 'TS29122_CommonData.yaml#/components/responses/415'
  '429':

```

```

    $ref: 'TS29122_CommonData.yaml#/components/responses/429'
  '500':
    $ref: 'TS29122_CommonData.yaml#/components/responses/500'
  '503':
    $ref: 'TS29122_CommonData.yaml#/components/responses/503'
  default:
    $ref: 'TS29122_CommonData.yaml#/components/responses/default'

/ue-group-loc-analytics/{ueGroupLocId}:
  delete:
    description: Deletes the individual location-related UE group analytics subscription.
    operationId: DeleteIndLocRelUeGroupSubsc
    tags:
      - Individual location-related UE group analytics subscription
    parameters:
      - name: ueGroupLocId
        in: path
        description: Identifier of an individual location-related UE group analytics subscription.
        required: true
        schema:
          type: string
    responses:
      '204':
        description: >
          The individual location-related UE group analytics subscription matching the
          ueGroupLocId is deleted.
      '307':
        $ref: 'TS29122_CommonData.yaml#/components/responses/307'
      '308':
        $ref: 'TS29122_CommonData.yaml#/components/responses/308'
      '400':
        $ref: 'TS29122_CommonData.yaml#/components/responses/400'
      '401':
        $ref: 'TS29122_CommonData.yaml#/components/responses/401'
      '403':
        $ref: 'TS29122_CommonData.yaml#/components/responses/403'
      '404':
        $ref: 'TS29122_CommonData.yaml#/components/responses/404'
      '429':
        $ref: 'TS29122_CommonData.yaml#/components/responses/429'
      '500':
        $ref: 'TS29122_CommonData.yaml#/components/responses/500'
      '503':
        $ref: 'TS29122_CommonData.yaml#/components/responses/503'
      default:
        $ref: 'TS29122_CommonData.yaml#/components/responses/default'

components:
  securitySchemes:
    oAuth2ClientCredentials:
      type: oauth2
      flows:
        clientCredentials:
          tokenUrl: '{tokenUrl}'
          scopes: {}

schemas:
  Ue2UePerfReq:
    description: ADAES requests ADAEC for the UE-to-UE session performance analytics.
    type: object
    properties:
      serverId:
        type: string
        description: String identifying the ADAE server
      analyticsId:
        type: string
        description: String identifying the UE-to-UE session analytics
      valUeIds:
        type: array
        items:
          $ref: 'TS29549_SS_UserProfileRetrieval.yaml#/components/schemas/ValTargetUe'
        minItems: 1
        description: >
          One or more VAL UE IDs whose UE-to-UE session performance is requested.
      pc5Qos:
        $ref: 'TS29571_CommonData.yaml#/components/schemas/Pc5QoSPara'
      reportConfig:
        $ref: 'TS29523_Npcf_EventExposure.yaml#/components/schemas/ReportingInformation'

```

```

repThresholds:
  description: >
    Identifies reporting threshold corresponding to the analytics.
  type: array
  items:
    $ref: '#/components/schemas/Ue2UeRepThreshold'
  minItems: 1
dataAbstractReq:
  description: >
    Indicates whether the data abstraction is required (true) or not (false).
  type: boolean
  default: false
dataCollectReq:
  $ref: '#/components/schemas/DataCollectReq'
area:
  $ref: 'TS29122_CommonData.yaml#/components/schemas/LocationArea'
timeWindow:
  $ref: 'TS29122_CommonData.yaml#/components/schemas/TimeWindow'
suppFeat:
  $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
required:
  - serverId
  - analyticsId
  - valUeIds
  - pc5Qos

Ue2UePerfResp:
  description: >
    ADAEC responds to ADAES with the UE-to-UE session performance analytics information.
  type: object
  properties:
    dataOutputs:
      type: array
      items:
        type: string
      minItems: 1
      description: >
        UE-to-UE session performance analytics for prediction or statistics.
    valUeIds:
      type: array
      items:
        $ref: 'TS29549_SS_UserProfileRetrieval.yaml#/components/schemas/ValTargetUe'
      minItems: 1
      description: >
        One or more VAL UEs whose UE-to-UE session performance has been requested.
    analyticsId:
      type: string
      description: String identifying the UE-to-UE session analytics
    suppFeat:
      $ref: 'TS29571_CommonData.yaml#/components/schemas/SupportedFeatures'
  required:
    - dataOutputs
    - valUeIds

Ue2UeRepThreshold:
  description: Identifies reporting threshold corresponding to the analytics.
  type: object
  properties:
    thrName:
      $ref: 'TS29549_SS_ADAE_Ue2UePerformanceAnalytics.yaml#/components/schemas/U2UAnalytics'
    thrValue:
      description: Indicates the value for the analytics threshold.
      type: string
    thrMatchDirect:
      $ref: 'TS29520_Nnwdaf_EventsSubscription.yaml#/components/schemas/MatchingDirection'
  required:
    - thrName
    - thrValue
    - thrMatchDirect

DataCollectReq:
  description: Contains data collection requirements.
  type: object
  properties:
    dataFormat:
      description: Indicates the format of the requested data.
      type: string
    repPeriod:

```

```
  $ref: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'
  abstractLevel:
    description: Indicates the desired level of abstraction of the requested data.
    type: string
  accuracyLevel:
    $ref: 'TS29571_CommonData.yaml#/components/schemas/Uinteger'
  required:
    - dataFormat
```

```
PullSrvExpInfo:
  description: Contains VAL server and service identities.
  type: object
  properties:
    valServerId:
      type: string
      description: String identifying the VAL server the service experience report applies.
    valServiceId:
      type: string
      description: Identity of the VAL service.
  required:
    - valServerId
```

```
SrvExpInfoRep:
  description: Allows ADAEC to provide the service experience report to the ADAES.
  type: object
  properties:
    valUeId:
      $ref: 'TS29549_SS_UserProfileRetrieval.yaml#/components/schemas/ValTargetUe'
    valServerId:
      type: string
      description: String identifying the VAL server the service experience report applies.
    valServiceId:
      type: string
      description: String identifying the VAL service
    timeStamp:
      $ref: 'TS29122_CommonData.yaml#/components/schemas/DurationSec'
    valSrvExpRep:
      $ref: 'TS29523_Npcf_EventExposure.yaml#/components/schemas/ReportingInformation'
  required:
    - valUeId
    - valServerId
```

```
# Simple data types and Enumerations
```

## Annex B (informative): Change history

Change history							
Date	Meeting	TDoc	CR	Re v	Cat	Subject/Comment	New version
2023-02	CT1#140	C1-230160				Skeleton for Application Data Analytics Enablement Service	0.0.0
2023-05	CT1#142	C1-233310				Application data analytics enablement service abbreviations and references	0.1.0
2023-05	CT1#142	C1-234031				Application data analytics enablement service functional entities	0.1.0
2023-05	CT1#142	C1-234032				Application data analytics enablement service procedures	0.1.0
2023-05	CT1#142	<a href="#">C1-234033</a>				Application data analytics enablement service procedures	0.1.0
2023-10	CT1#144	<a href="#">C1-237009</a>				Correction of general description	0.2.0
2023-10	CT1#144	C1-237962				ADAEs configuration API	0.2.0
2023-10	CT1#144	C1-237963				Application performance analytics configuration API	0.2.0
2023-10	CT1#144	C1-237964				Procedure for application performance analytics	0.2.0
2023-11	CT1#145	C1-239589				Resource review for ADAE services	0.3.1
2023-11	CT1#145	C1-239666				Application performance event subscription for ADAE services	0.3.1
2023-11	CT1#145	C1-239672				UE-to-UE session performance for ADAE services	0.3.1
2023-11	CT1#145	C1-239673				Edge load event subscription for ADAE services	0.3.1
2023-11	CT1#145	C1-239588				Service experience for ADAE services	0.3.1
2023-11	CT1#145	C1-239674				Application performance event notification for ADAE services	0.3.1
2023-11	CT1#145	C1-239675				Edge load event notification for ADAE services	0.3.1
2023-11	CT1#145	C1-239586				Data model for ADAE services	0.3.1
2023-11	CT1#145	C1-239587				Error handling for ADAE services	0.3.1
2023-11	CT1#145	C1-239477				Notification overview for ADAE services	0.3.1
2024-01	CT1#146	C1-240300				Add references	0.4.0
2024-01	CT1#146	C1-240301				Corrections and removal of some titles	0.4.0
2024-01	CT1#146	C1-240302				Restructuring of resource URI for ADAES	0.4.0
2024-01	CT1#146	C1-240303				Service description and operations for application performance analytics	0.4.0
2024-01	CT1#146	C1-240304				Service description and operations for UE-to-UE session performance analytics	0.4.0
2024-01	CT1#146	C1-240305				Service description and operations for edge load data collection	0.4.0
2024-01	CT1#146	C1-240306				Service description and operations for service-experiment	0.4.0
2024-01	CT1#146	C1-240307				Usage of HTTP, common API framework, and security	0.4.0
2024-01	CT1#146	C1-240308				ADAE service configuration OpenAPI	0.4.0
2024-03	CT1#147	C1-241600				Miscellaneous corrections	0.5.0
2024-03	CT1#147	C1-241601				Miscellaneous corrections	0.5.0
2024-03	CT1#147	C1-241602				OpenAPI corrections	0.5.0
2024-03	CT1#147	C1-241603				Description of functional entities	0.5.0
2024-03	CT1#147	C1-241604				Usage of HTTP	0.5.0
2024-03	CT1#147	C1-241605				Update the configuring triggers and PUSH service experience information report procedures	0.5.0
2024-03	CT#103	CP-240251				Presentation to TSG CT#103 for information and approval	1.0.0
2024-03	CT#103					Approved in CT#103	18.0.0
2024-03	CT#103					YAML files that were missing in previous version included	18.0.1
2024-06	CT#104	CP-241166	0001	1	B	UE-to-UE session performance analytics request	18.1.0
2024-06	CT#104	CP-241166	0002	1	B	Supported features indication in UE-to-UE session performance analytics	18.1.0
2024-06	CT#104	CP-241166	0003		F	Support of redirections	18.1.0
2024-06	CT#104	CP-241166	0004		F	Definition of timeWindow	18.1.0
2024-06	CT#104	CP-241166	0005	2	F	Remove API definition and OPEN API for Configuring Triggers and PUSH service experience information report.	18.1.0
2024-06	CT#104	CP-241273	0006		F	Update of info and externalDocs fields	18.1.0
2024-12	CT#106	CP-243271	0007	2	B	Collision Detection Analytics	19.0.0
2024-12	CT#106	CP-243241	0008	2	B	Location-related UE Group Analytics	19.0.0
2024-12	CT#106	CP-243286	0009		F	Update of info and externalDocs fields	19.0.0
2025-03	CT#107	CP-250173	0010	2	F	The format of the structured URI query parameters	19.1.0
2025-03	CT#107	CP-250227	0012		F	Update of info and externalDocs fields	19.1.0
2025-06	CT#108	CP-251206	0013	1	F	Correcting data type	19.2.0
2025-06	CT#108	CP-251255	0014		F	Update of info and externalDocs fields	19.2.0
2025-09	CT#109	CP-252139	0015		F	Corrections on the ADAE_ServiceConfiguration	19.3.0
2025-09	CT#109	CP-252171	0016		F	Update of info and externalDocs fields	19.3.0

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# History

<b>Document history</b>		
V19.3.0	January 2026	Publication